

ABSTRACT OF THE INVENTION

A three dimensional optical circuit featuring an optical manifold for organizing, guiding and protecting individual optical fibers is shown. One aspect of the present invention is a three dimensional manifold which may be constructed using a rapid prototyping process such as, but not limited to, stereolithography ("SLA"), fused deposition modeling ("FDM"), selective laser sintering ("SLS"), and the like. The manifold has a number of input openings in a first ordered arrangement at one end connected by passageways to a number of output openings in a second ordered arrangement at the opposite end. A plurality of optical fibers may be directed through the passageways of the manifold to produce a three dimensional optical circuit such as a shuffle. Moreover, the optical manifold may be used in conjunction with a number of connections or terminations to form a various optical modules. These modules may be configured for rack mounting within enclosures for electrical components.